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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/030,592	05/21/2002	Shu Nakajima	LAM2P322	2125
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EXAMINER
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HARRIS, ANTON B

ART UNIT	PAPER NUMBER
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2831

DATE MAILED: 08/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/030,592

Applicant(s)

NAKAJIMA ET AL.

Examiner

Anton B Harris

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Logan et al. (5,055,964).

Regarding claim 1, Logan et al. (col. 3 line 39-col.4 line 59) discloses an electrostatic chuck, comprising:

a metal base plate 26;

a disc-shaped ceramic layer 28 having a predetermined thickness adhesively bonded to the metal base plate 26;

a planar electrode 12 positioned in the ceramic layer 28 in the middle thereof in its thickness direction; and

a cooling gas channel 42 is formed on a surface of the ceramic layer over the electrode 12 and within an outer peripheral edge of the electrode 16.

Regarding claim 2, Logan et al. (col. 3 line 39-col.4 line 59) discloses that planar electrode 12 extends beyond the cooling gas channel 42.

Regarding claim 3, Logan et al. (col. 3 line 39-col.4 line 59) discloses cooling gas channel 42 comprises a ring shape along an outer peripheral edge of the ceramic layer 28, the

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chuck 10 further comprising gas feed orifices 38 located in a plurality of positions at a bottom portion of the gas cooling channel 42 and gas feed orifices 38 located in a plurality of positions on a circumference on a surface of the ceramic layer 28 in the center side of the chuck 10. See figure 3.

Regarding claim 4, Logan et al. (col. 3 line 39-col.4 line 59) discloses planner electrode comprises a first electrode 12 and a second electrode 14, the first electrode 12 comprising:

- a disc portion arranged in the center of said ceramic layer 28; and

- a first extending portion extending from a part of the disc portion toward the outer peripheral edge 16 of the ceramic layer 28; the second electrode 14 comprising:

- a second extending portion arranged opposite to the first extending portion over the disc portion of the first electrode 12 and arranged in lacking portions of the plurality of the first C-shaped ring portions of the first electrode 12; and

- a circular ring portion 12a connected to an outer edge 24 of the second extending portion so as to form the outermost peripheral portion of the second electrode 14.

Regarding claim 5, Logan et al. (col. 3 line 39-col.4 line 59) discloses first electrode 12 further comprises a plurality of first C-shaped ring portions at predetermined intervals so as to have different diameters extending in C shapes in both sides of the first extending portion surrounding the disc portion. See figure 3.

Regarding claim 6, Logan et al. (col. 3 line 39-col.4 line 59) discloses second electrode 14 further comprises a plurality of second C-shaped ring portions at predetermined intervals so as to have different diameters extending in C shapes in both sides of the second extending

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portion and being engaged with the plurality of the C-shaped ring portions of the first electrode

12. See figure 3.

Regarding claim 7, Logan et al. (col. 3 line 39-col.4 line 59) discloses a first disc-shaped ceramic material compact having a half of a thickness of a completed ceramic layer 28; forming an electrode 12 on a surface of the first ceramic material compact; preparing a second disc-shaped ceramic material compact having a half of a thickness of the completed ceramic layer and having a cooling gas channel 42 on its surface within the electrode ; placing said second ceramic material compact on the first ceramic material compact so as to form a laminate and firing the entire laminate to complete a ceramic layer 28; and bonding the completed ceramic layer 28 to a metal base plate 26 by means of an adhesive layer.

Furthermore regarding claims 7 and 8, the methods disclosed therein are deemed as inherent in the assembly of the apparatus as claimed as fully met by the above reference Logan et al. and are subsequently rejected.

### *Conclusion*

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Logan et al. U.S. Patent No. 5,191,506 discloses an electrostatic chuck with grooves formed on the surface layer and a semiconductor wafer.

Kumar et al. European Patent No. 0,805,487 A2 discloses an electrostatic chuck with fuses.

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Tamagawa et al. U.S. Patent No. 5,777,838 discloses an electrostatic chuck having first and second surfaces.


4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anton B Harris whose telephone number is (703) 305-4764. The examiner can normally be reached on weekdays from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Dean Reichard, can be reached on (703) 308-3682. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-1341.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0956.

abh

8/11/03

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DEAN A. REICHARD  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800